

STATE OF NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES

AIR RESOURCES DIVISION

CHAPTER ENV-A 800 TESTING AND MONITORING PROCEDURES

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Statutory Authority: RSA 125-C:6, X1, XII

PART Env-A 801 PURPOSE

Env-A 801.01 Purpose. The purpose of this chapter is to establish procedures for conducting emission testing and ambient air quality monitoring required by the division to determine compliance with all applicable rules.

PART Env-A 802 TESTING AND MONITORING FOR STATIONARY SOURCES: GENERAL REQUIREMENTS

Env-A 802.01 Detailed Plan Required. A detailed plan for testing and monitoring shall be agreed upon by the division and the owner or operator, or authorized agent, prior to the start of testing or monitoring. The plan shall identify at a minimum:

- (a) Process operating conditions during the test or monitoring;
- (b) Test or monitoring methods and procedures;
- (c) Test or monitoring equipment and sampling sites; and
- (d) Monitoring frequency and duration.

Env-A 802.02 Testing or Monitoring by Owner, Operator or Division. Testing or monitoring required by the division shall be conducted by the owner or operator or by the division. If such testing or monitoring is conducted by the owner or operator, the owner or operator shall notify the division of the date and time such testing or monitoring shall occur. The division shall witness the procedure if the staff necessary to do so is available at the time such testing occurs. If sufficient staff is unavailable, required testing or monitoring shall be permitted to proceed upon written notification by the director to the source owner or operator.

Env-A 802.03 Testing Done at a Reasonable Time and Point or Points. Testing shall be done at a reasonable time and at a point or points representative of actual emissions into

the ambient air.

Env-A 802.04 Designated Methods Required. Testing or monitoring to determine the quantity of emission or ambient concentration shall be undertaken by methods of measurement approved by the EPA. However, on a case-by-case basis, the division shall designate alternative methods for non-criteria pollutants.

Env-A 802.05 Owner or Operator Provision of Necessary Sampling Ports and Equipment. When the division conducts testing or has the tests conducted, the owner or operator shall provide the following:

- (a) Sampling ports as may be required;
- (b) Power and water sources; and
- (c) Safety equipment such as scaffolding, railing and ladders to comply with generally accepted good safety practices.

Env-A. 802.06 Data Provided to Both Division and Owner or Operator. All data obtained from testing or monitoring shall be provided to the division and owner or operator or authorized agent.

Env-A 802.07 Fees for Testing and Monitoring. If the division witnesses, conducts or evaluates required testing or monitoring, the owner or operator shall pay to the division a fee as provided in Chapter Env-A 700.

PART Env-A 803 VOC TESTING

Env-A 803.03 Surface coating operations. For surface coating operations such as can, paper, fabric, film, foil, vinyl, metal furniture, wood substrate, magnetic wire, metal coil, plastic parts, and miscellaneous metal parts and products coating and specialty printing operations, the following test methods shall be used:

- (a) When compliance is by low-VOC coatings or inks, the VOC content and applicable physical properties shall be determined using one of the applicable methods specified below:
 - (1) Method 24, 40 CFR part 60, Appendix A at 1-hour bake time, or an alternative test method approved by the director in accordance with Env-A 807.01, for all coatings used in processes subject to Env-A 1204.09 through Env-A 1204.17 and for flexographic or packaging rotogravure printing ink and related coatings used in specialty printing operations subject to Env-A 1204.10;

(2) Method 24A, 40 CFR Part 60, Appendix A, or an alternative test method approved by the director in accordance with Env-A 807.01, for rotogravure printing ink and related coatings used in specialty printing operations subject to Env-A 1204.10.

(b) When compliance is by add-on control systems, the control efficiency of the add-on control system shall be determined using the following methods:

(1) Method 18 and 25, 25A or 25B, 40 CFR part 60, Appendix A, or an alternative test method approved by the director in accordance with Env-A 807.01, for determination of gaseous organic concentrations;

(2) Method 1 or 1A, 40 CFR Part 60, Appendix A, or an alternative test method approved by the director in accordance with Env-A 807.01, for selection of the sampling sites to be used for determining the volumetric flow rate of exhaust gases.

(3) Method 2, 2A, 2C or 2D, 40 CFR Part 60, Appendix A, or an alternative test method approved by the director in accordance with Env-A 807.01, for determining the velocity and volumetric flow rate of the exhaust stream;

(4) Method 3 or 3A, 40 CFR Part 60, or an alternative test method approved by the director in accordance with Env-A 807.01, for determining the oxygen and carbon monoxide content; and

(5) Method 4, 40 CFR Part 60, or an alternative test method approved by the director in accordance with Env-A 807.01, for determining the stack gas moisture content.

(c) Compliance may alternatively be determined using the daily weighted average procedure described as follows:

(1) The daily-weighted average VOC content, in units of mass of VOC per unit volume of coating, minus water and exempt compounds, as applied, of the coatings used on a day on a coating line or operation shall be calculated using the following procedure:

a. "VOC_w" means the daily-weighted average VOC content of the coatings, as applied, used on a coating line or operation in units of pounds (lb) per gallon (gal) or kilograms (kg) per liter (l) VOC of

coating, minus water and exempt compounds;

b. “n” means the number of different coatings, as applied, used each day on a coating line or operation;

c. “V_i” means the volume of the ith coating, as applied, used each day on a coating line or operation, in units of gallons or liters, minus water and exempt compounds;

d. “C_i” means the VOC content of the ith coating, as applied, used each day on a coating line or operation in units of lb/gal, or kg/l, VOC of coating, minus water and exempt compounds;

e. “V_T” means the total volume of all coating, as applied, used each day on a coating line or operation in units of gal or l, minus water and exempt compounds; and

f. The VOC_w shall be equal to the sum, over the n coatings used on a given coating line, of the products of each V_i and C_i, divided by V_T, as in the following equation:

$$\text{VOC}_w = \frac{\sum_{i=1}^n (V_i C_i)}{V_T}$$

(2) The overall emission reduction percentage required to demonstrate compliance shall be determined for each day as follows:

a. “S” means the VOC emission standard in terms of lb/gal, or kg/l, of coating solids;

b. “C” means the VOC emission standard in terms of lb/gal, or kg/l, of coating, minus water and exempt compounds, obtained from the appropriate section of part Env-A 1204;

c. “d” means the mass density or VOC for converting emission standard to a solids basis;

d. “E” means the required overall emission reduction efficiency of the control system for the day, expressed as a percentage;

e. "VOC_a" means either :

1. The maximum VOC content of the coatings, as applied, used each day on the subject coating line or operation, in units of lb/gal VOC of coating solids, as determined by the applicable test methods and procedures specified in Env-A 803.03; or

2. The daily-weighted average VOC content, as applied, of the coatings used each day on the subject coating line or operation, in units of lb/gal, or k/l, of VOC of coating solids as determined by the applicable test methods and procedures specified in Env-A 803.03 and the procedure in subparagraph (3), below:

f. S shall be equal to C divided by the difference between one and the quotient of C and d, as in the following equation:

$$S = C / (1 - C/d) ; \text{ and}$$

g. E shall be equal to the difference between VOC_a and S, multiplied by 100 and divided by VOC_a, as in the following equation:

$$E = \frac{(VOC_a - S) \times 100}{VOC_a}$$

(3) The daily-weighted average VCC content, as applied, of the coatings used on a coating line or operation in units of mass of VOC per unit volume or coating solids shall be calculated by the following procedure when the value of VOC_a is calculated based on the daily weighted average method described in (c) (2), above:

a. "VOC_{ws}" means the daily weighted average VOC content, as applied, of the coatings used on a coating line or operation in units of mass of VOC per unit volume or coating solids;

b. "n" means the number of different coatings, as applied, used on a day on a coating line or operation;

c. "V_i" means the volume of the ith coating as applied, used on a day on a coating line or operation in units of gallons or liters;

d. "VS_i" means the volume fraction solids content of the ith coating as applied, used on a day on a coating line or operation in units of gal solids/gal coating, or l solids/l coating;

e. "CS_i" means the VOC content of the ith coating as applied, used on a day on a coating line or operation in unit of lb VOC/gal solids, or kg VOC/l solids; and

f. "VOC_{ws}" shall be equal to the sum, over the n different coatings used in each coating line, of the products of the individual V_i, VS_i, and CS_i, divided by the sum, over the n different coatings used in each coating line of the products of the individual V_i and VS_i as in the following equation:

$$VOC_{ws} = \frac{\sum_{i=1}^n V_i VS_i CS_i}{\sum_{i=1}^n V_i VS_i}$$

(d) For multicomponent coatings, the following procedures shall be used in addition to Method 24 of 40 CFR Part 60, Appendix A, or an alternative test method approved by the director in accordance with Env-A 807.01:

- (1) Separate samples of each component shall be obtained;
- (2) The components shall be mixed in a container in the same proportions as those in the coating, as applied;
- (3) The container in which mixing takes place shall be closed between additions and during mixing;
- (4) About 100 ml of coating shall be prepared in a container just large enough to hold the mixture prior to withdrawing a sample; and
- (5) A sample shall be withdrawn from the mixed coating and then transferred to a dish which shall be weighed and then allowed to stand for at least one hour, but not more than 24 hours prior to being oven dried at 110° C for one hour.

Env-A 803.04 Rotogravure and Flexographic Printing and Graphics.

(a) For rotogravure and flexographic printing and graphics operations subject to Env-A 1204.18, compliance shall be determined using either:

(1) The applicable test method described in Env-A 803.03(a) when compliance is by the use of low solvent inks; or

(2) The test method described in Env-A 803.03(b), when compliance is by the use of add-on control systems.

(b) The total potential VOC emissions shall be determined as follows:

(1) “E_p” means the total potential emissions of VOC from a single flexographic or rotogravure printing press, in lb/yr;

(2) “w_{vs}” means the weight of VOC per volume of solids of the coating or ink, as applied, during the relevant consecutive 12 month period, on the printing press, in lb. VOC/gal or coating or ink solids;

(3) “V_{TS}” means the total volume of solids for all coatings and inks that can potentially be applied during the relevant consecutive 12-month period, on the printing press, in gal/yr; and

(4) E_p shall be equal to the product of w_{vs} and V_{TS}, as in the following equation:

$$E_p = w_{vs} \times V_{TS}$$

(c) A description of the instrument and/or method by which the volume of coating and/or ink solids applied and the amount that can potentially be applied each year on the printing press was measured or calculated shall be provided by the facility.

Env-A 803.05 Offset Lithography

(a) Testing and monitoring for the VOC content of the fountain solution to determine compliance with Env-A. 1204.19 (c) (4), including applicable refrigeration monitoring requirements, shall be as prescribed below:

(1) The VOC content of the fountain solution shall be determined by one of the following procedures:

a. Method 24, 40 CFR part 60, Appendix A, applied to a sample of the fountain solution;

b. A calculation which:

1. Uses Method 24, 40 CFR Part 60, Appendix A

analytical VOC content data for the concentrated material constituents; and

2. Mathematically combines the analytical content data for the materials used to prepare the press-ready fountain solution based on records of the proportions in which they are mixed to make the press-ready material;

c. Measurement of an in-use sample of fountain solution with a hydrometer or refractometer that has been standardized using the procedures of d.3(i) or d.3(ii), below, which demonstrates that the value so obtained is not more than 10% greater than the value determined in accordance with the procedures of a. or b., above;

d. Monitoring with a refractometer, in accordance with the following procedure:

1. The refractometer shall be corrected for temperature at least once per 8-hour shift or once per batch, whichever is longer;

2. The refractometer shall have a visual, analog, or digital readout with an accuracy of $\pm 0.5\%$;

3. The refractometer shall be calibrated by one of the following methods:

(i) Using a standard solution to calibrate the refractometer for the type of alcohol used in the fountain; or

(ii) Standardizing the refractometer against measurements or calculations performed to determine compliance, according to the procedures described in a. or b. , above;

e. Monitoring with a hydrometer, according to the following procedure:

1. Temperature correction shall be achieved as follows:

(i) The hydrometer shall be equipped with temperature correction; or

(ii) Readings shall be adjusted for temperature;

2. Said monitoring shall be performed at least once per 8-hour shift or once per batch, whichever is longer;

3. The hydrometer shall have a visual, analog, or digital readout with an accuracy of $\pm 0.5\%$; and

4. The hydrometer shall be calibrated by one of the following methods:

(i) Using a standard solution to calibrate the hydrometer for the type of alcohol used in the fountain; or

(ii) Standardizing the hydrometer against measurements or calculations performed to determine compliance, according to the procedures described in a. or b. , above;

f. Where a refractometer or hydrometer cannot be used to monitor the type of VOCs in the fountain solution, monitoring with a conductivity meter in accordance with the following:

1. The reading of the conductivity meter shall be referenced to the conductivity of the incoming water; and

2. The conductivity meter shall be calibrated by one of the following methods:

(i) Using a standard solution to calibrate the conductivity meter for the type of alcohol used in the fountain; or

(ii) Standardizing the conductivity meter against measurements or calculations performed to determine compliance, according to the procedures described in a. or b. , above; or

g. An alternative procedure approved by the director in accordance with Env-A 807.01.

(2) Compliance with the fountain solution temperature requirements

imposed by the options of Env-A 1204.19 (c)(4)a.2. for web-fed heatset operations or Env-A 1204.19 (c)(4)b.2. for sheet-fed operations shall be demonstrated as follow:

- a. Using a thermometer or other temperature detection device capable of reading to within ± 0.5 degrees F; and
- b. Reading and recording the output of said instrument at least once per operating day to verify proper operation of the refrigeration system.

(b) Testing and monitoring for the VOC content of the cleaning solution pursuant to Env-A 1204.19 (c)(1), including the determination of VOC composite partial pressures, where applicable, shall be as prescribed below:

(1) The VOC content of the cleaning solution shall be determined by one of the following procedures:

- a. Method 24, 40 CFR Part 60, Appendix A, or an alternative test method approved by the director in accordance with Env-A 807.01, applied to a sample of the cleaning solution;
- b. A calculation which:
 - 1. Uses Method 24, 40 CFR Part 60, Appendix A analytical VOC content data for the concentrated material constituents; and
 - 2. Mathematically combines the analytical content data for the materials used to prepare the press-ready fountain solution based on records of the proportions in which they are mixed to make the press-ready material; or
- c. An alternative procedure approved by the director in accordance with Env-A 807.01; and

(2) The VOC composite partial vapor pressure of the cleaning solution pursuant to the option specified in Env-A 1204.19 (c)(1)b. shall be determined by one of the following procedures:

- a. Measurement of the VOC composite partial vapor pressure of a sample of the cleaning solution using an analytical method approved by the director in accordance with Env-A 807.01; or

b. A calculation which combines analytical VOC vapor pressure data for the concentrated materials used to prepare the press-ready material based on records of the proportions in which they are mixed to make the press-ready cleaning solution.

(3) Offset lithographic printing presses choosing to demonstrate compliance with the VOC limitations specified in Env-A 1204.19 (c)(1)a. and equipped with automatic devices that mix cleaning solution at the point of application shall employ flow meters or fixed-volume spray systems to monitor water and cleaning solution application rates.

(c) Compliance with the control efficiency requirements for an add-on control device used to reduce VOC emissions from the dryer exhaust, pursuant to Env-A 1204.19 (c)(3), shall be demonstrated using the applicable procedure(s) described in Env-A 803.03 (b).

PART Env-A 804 CAPTURE EFFICIENCY (CE)

Env-A 804.01 Scope. Capture efficiency (CE) testing requirements of this section shall apply to all VOC-emitting processes which are subject to the provisions of Env-A 1204.09 through Env-A 1204.27 where it has been determined by the director that CE testing is required to demonstrate compliance with said provisions.

Env-A 804.02 Definitions. For the purposes of this part, the following definitions and abbreviations shall apply:

(a) “Average face velocity” means the velocity at an emissions collection point as calculated by dividing the average volumetric flow rate by the total of the face of the collection.

(b) “Building enclosure (BE)” means a building enclosure or room enclosure that:

(1) Contains a VOC-emitting process; and

(2) Meets the specifications given in Method 204.

(c) “Capture” means the containment or recovery of emissions from a process for direction into an exhaust duct which leads to a stack or a control device.

(d) “Capture efficiency (CE)” means the weight per unit of time of VOC entering a capture system and delivered to a control device divided by the weight per unit of time of total VOC emitted by an emission source of VOC expressed as a

percentage.

(e) "Capture system" mean any equipment that contains, collects and/or transports an air pollutant to a control device, such as hoods, ducts, fans, booths, ovens, and dryers.

(f) "Control device" means equipment used to reduce, by destruction or removal, the amounts of air pollutants in an air stream prior to discharge into the ambient air, such as an incinerator or carbon adsorber.

(g) "Control system" means a combination of one or more capture system(s) and control device(s).

(h) "Destruction or removal efficiency" means the efficiency, expressed as a percentage, of a control device in destroying or removing contaminants calculated as 1 minus the ratio of the amount of VOC exiting the control device to the amount of VOC entering the control device.

(i) "Gas/gas method" means a method for determining capture efficiency which relies only on gas phase measurements, either by:

(1) Construction of a temporary total, enclosure (TTE) to assure all would-be fugitive emissions are measured; or

(2) Use of a building or room which houses the emission source as a BE.

(j) "GFDCE" means the following document published by the U.S. EPA:

GUIDELINES FOR DETERMINING CAPTURE EFFICIENCY

Candace Sorrell

Source Characterization Group A (MD-19)

Emission Monitoring and Analysis Division

Office of Air Quality Planning and Standards

U. S. Environmental Protection Agency

Research Triangle Park, NC 27711

January 9, 1994.

(k) "Hood" means a partial enclosure or canopy for capturing and exhausting, by means of a draft, the organic vapors or other fumes rising from a coating process or other source.

(l) "Liquid/gas method" means a method for determining capture efficiency which requires both gas phase and liquid phase measurements and analysis, either by:

(1) Construction of a temporary total enclosure (TTE); or

(2) Use of a building or room which houses the emission source as a BE.

(m) "Method 204" means the criteria for and verification of a permanent or temporary total enclosure as presented in the GFDCE.

(n) "Method 204A" means the procedure for determining the volatile organic compounds content in a liquid input stream as presented in the GFDCE.

(o) "Method 204B" means the procedure for determining the volatile organic compounds emissions in a captured stream as presented in the GFDCE.

(p) "Method 204C" means the procedure for determining the volatile organic compounds emissions in a captured stream using a dilution technique as prescribed in the GFDCE.

(q) "Method 204D" means the procedure for determining the volatile organic compounds emissions in a fugitive stream from a temporary total enclosure as presented in the GFDCE.

(r) "Method 204E" means the procedure for determining the volatile organic compounds emissions in a fugitive stream from a building enclosure as presented in the GFDCE.

(s) "Method 204F" means the procedure for determining the volatile organic compounds content in a liquid input stream, such as the distillation approach, presented in the GFDCE.

(t) "Overall control" means the ratio of the total recovered solvent VOC in a control device to the sum of the liquid VOC input to all process lines venting to the control system.

(u) "Overall emission reduction efficiency" means the weight per unit time of VOC removed by a control device divided by the weight per unit time of VOC emitted by an emission source, expressed as a percentage. The overall emission reduction efficiency is the product of the capture efficiency and the control equipment destruction or removal efficiency.

(v) "Permanent total enclosure (PTE)" means a permanent enclosure which:

(1) Contains a process that emits VOC; and

(2) Meets the specifications given in Method 204.

(w) “Temporary total enclosure (TTE)” means a temporary enclosure which:

(1) Is built around a process that emits VOC; and

(2) Meets the specification given in Method 204.

Env-A 804.03 Requirements for CE Testing.

(a) Detailed requirements for capture efficiency testing shall be as specified in this section and in the GFDCE.

(b) Any source required to perform capture efficiency tests shall do one of the following:

(1) Perform one of the CE test procedures specified in Env-A 804.04;

(2) Use one of the alternative CE test procedures specified in Env-A 804.05; or

(3) Use an alternative protocol which has been approved by EPA as a SIP revision, and adopted pursuant to RSA 541-A:3.

Env-A 804.04 CE Procedures

(a) For the gas/gas method using a TTE, as described in Method 204, the capture efficiency shall be determined by the following procedure:

(1) “CE” means the capture efficiency calculated as a decimal fraction;

(2) “G” means the mass of VOC captured and delivered using TTE, obtained using Method 204C. If a single flame ionization analyzer (FIA) device cannot be used simultaneously for Method 204D and Method 204C, Method 204B may be used for the determination of G;

(3) “F” means the mass of fugitive VOC that escapes from a TTE, obtained using Method 204D; and

(4) CE shall be obtained by dividing G by the sum of G and F, as in the following equation:

$$CE = G / (G + F)$$

(b) For the liquid/gas method using TTE, as described in Method 204, the capture efficiency shall be determined by the following procedure:

- (1) “CE” means the capture efficiency calculated as a decimal fraction;
- (2) “L” means the mass of liquid VOC input to process, obtained using Method 204A or Method 204F;
- (3) “F” means the mass of fugitive VOC that escapes from a TTE, obtained using Method 204D; and
- (4) CE shall be obtained by dividing the difference between L and F by L, as in the following equation:

$$CE = (L - F) / L$$

(c) For the gas/gas method using as the enclosure the BE in which the affected source is located and in which G and F_B, as defined in (c)(2), below, are measured while operating only the affected facility:

- (1) All fans and blowers in the BE shall be operated as they would under normal production; and
- (2) The capture efficiency shall be determined as follows:
 - a. “CE” means the capture efficiency calculated as a decimal fraction;
 - b. “G” means the mass of VOC captured and delivered to a control device, obtained using Method 204C. If a single flame ionization analyzer (FIA) device cannot be used simultaneously for Method 204E and Method 204C, Method 204B may be used for the determination of G;
 - c. “F_B” the mass of fugitive VOC that escapes from the BE, obtained using Method 204E; and
 - d. CE shall be obtained by dividing G by the sum of G and F_B, as in the following equation:

$$CE = G / (G + F_B)$$

(d) For the liquid/gas method using as the enclosure the BE in which the affected

source is located and in which L and F_B , as defined in (d) (2), below, are measured while operating only the affected facility:

(1) All fans and blowers in the BE shall be operated as they would under normal production;

(2) The capture efficiency shall be determined as follows:

a. “CE” means the capture efficiency calculated as a decimal fraction;

b. “L” means the mass of liquid VOC input to the process, obtained using Method 204A or Method 204F;

c. “ F_B ” means the mass of fugitive VOC that escapes from the BE, obtained using Method 204E; and

d. The capture efficiency shall be obtained by dividing the difference between L and F_B by L, as in the following equation:

$$CE = (L - F_B) / L$$

Env-A 804.05 Alternative CE Procedures

(a) If a source installs a PTE that meets EPA specifications as described in Method 204 and which directs all VOC to a control device, the capture efficiency shall be assumed to be 100%, and the source shall be exempted from the CE testing requirements described in Env-A 804. A source that has installed a PTE shall not be exempt from the performance efficiency testing of any control device required under these or any other rules.

(b) Any source choosing to demonstrate that it meets the criteria for a PTE shall submit the following to the division:

(1) Documentation showing that all criteria for a PTE were met during the testing for control efficiency of the add-on control device; or

(2) For any time period other than during testing of the add-on control device for control efficiency, documentation which demonstrates that the operation of the control system occurred under the same conditions experienced during the control device compliance stack test.

(c) The data quality objective (DQO) approach as specified in the GFDCE,

Section 3.1 may be used as an alternative method for determining capture efficiency using either:

- (1) The Method 204 test series, in conjunction with the additional criteria specified in Section 3.3 of the GFDCE and the reporting and recordkeeping requirements of Section 3.4 and 3.5 of the GFDCE; or
- (2) An alternative method approved by the director following the procedures described in Env-A 807.

(d) The lower confidence limit (LCL) approach as specified in the GFDCE may be used as an alternative method for determining capture efficiency. The Method 204 test series, or an alternative method approved by the director following the procedures described in Env-A 807, shall be used in the LCL approach. Additional criteria specified in Section 3.3 of the GFDCE and the reporting and recordkeeping requirements of Section 3.4 and 3.5 of the GFDCE shall apply to the LCL approach method for determining capture efficiency, Section 3.2 of the GFDCE.

(e) Multiple line CE testing may be used if the requirements in the GFDCE, Section 4.0 are followed.

(f) For a source that uses a control device designed to collect and recover VOC, such as a carbon adsorber, the procedure specified in Env-A 804.06 may be used.

Env-A 804.06 Solvent Recovery Alternative to CE testing. For a source that uses a control device designed to collect and recover VOC, such as a carbon adsorber, the following alternative to CE testing may be used:

(a) The overall control efficiency of the system shall be determined over a minimum of a 24-hour period, and

(b) The testing procedures shall be as described in 40 CFR 60.433, applicable to new source performance standards, with the following additional restrictions for RACT-applicable VOC sources:

- (1) The source shall compare solvent usage to solvent recovery on a 24-hour basis, rather than a 30-day weighted average as given in 40 CFR 60.433; or

- (2) If the overall emission reduction efficiency required by the applicable regulation is met, as determined by the initial 24-hour test, the source may compare solvent usage to solvent recovery over an alternative time period

subject to the following:

a. The person seeking approval of an alternative time period shall submit the following information in writing to the director:

1. The identity and description of the facility, including the identity of the operations controlled with the recovery device;
2. The proposed alternative time period, not to exceed 30 days; and
3. Technical data and information demonstrating that the control device designed to collect and recover VOC will be operated in a manner consistent with the manner in which it was operated during the initial 24-hour period of the test, and that the results produced over the proposed time period are no less precise and accurate than those produced during the initial 24-hour time period;

b. The director shall review the information submitted pursuant to (b)(2)a. , above;

c. The director shall approve the proposed alternative time period if the information completely provides the following:

1. The identity and description of the facility, including the identity of the operations controlled with the recovery device;
2. The proposed time period;
3. Technical data and information necessary to demonstrate that the control device will be operated in a manner consistent with the manner in which it was operated during the initial 24-hour time period of the test; and
4. Technical data and information necessary to demonstrate that the results produced over the propose time period are no less precise and accurate than those produced during the initial 24-hour time period; and

d. The director shall notify the applicant and the EPA of the

decision within 60 days of receipt of the completed application.

(c) Each demonstration as specified in Env-A 804.06 (b)(1) relating solvent usage with solvent recovery, including the initial 24-hour time period, shall be performed by the source within 72 hours of the end of each established time period.

(d) Any recovery rates calculated using the procedure described in this section, which result in a lower rate than that needed to comply with the applicable rule, shall be reported to the division within 7 days.

(e) Any facility using the procedure described in this section shall also meet one of the following criteria:

(1) The solvent recovery system, such as a capture and control system, shall be dedicated to a single process line, for example one process line venting to a carbon adsorber system;

(2) If the solvent recovery system controls multiple process lines, the owner or operator shall demonstrate by submitting written documentation to the division that the overall control meets or exceeds the most stringent standards applicable for each process line venting to the control system;

(3) The overall control efficiency of the system shall be determined over a minimum of a 24-hour period; or

(4) The testing procedures shall be as described in 40 CFR 60.433, which is applicable to new source performance standards, with the following additional restrictions for RACT-applicable VOC sources:

a. The source shall compare solvent usage to solvent recovery on a 24-hour basis, rather than a 30-day weighted average as given in 40 CFR 60.433.

b. If the overall emission reduction efficiency required by the applicable regulation is met, as determined by the initial 24-hour test, the source may compare solvent usage to solvent recovery over an alternative time period subject to the following conditions:

1. The person seeking approval of an alternative time period shall submit the following information in writing to the director:

2. The identity and description of the facility, including the identity of the operations controlled with the recovery device;

3. The proposed alternative time period shall not exceed 30 days; and

4. Technical data and information demonstrating that the control device designed to collect and recover VOC will be operated in a manner consistent with the manner in which it was operated during the initial 24-hour period of the test, and that the results produced over the proposed time period are no less precise and accurate than those produced during the initial 24-hour time period;

c. The director shall review the information submitted pursuant to (b)(1) , above;

d. The director shall approve the proposed alternative time period within 60 days of receipt of the completed application; and

e. The director shall notify the applicant and the EPA of the decision, if the information completely provides the following:

1. The identity and description of the facility, including the identity of the operations controlled with the recovery device;

2. The proposed alternative time period;

3. Technical data and information necessary to demonstrate that the control device will be operated in a manner consistent with the manner in which it was operated during the initial 24-hour time period of the test; and

4. Technical data and information necessary to demonstrate that the results produced over the proposed time period are no less precise and accurate than those produced during the initial 24-hour time period.

(f) Each demonstration which compares solvent usage to solvent recovery, including the initial 24-hour time period, shall be performed by the source within 72 hours of the end of the previous demonstration.

(g) Any recovery rates calculated using the procedure described in this section, which result in a lower rate than that needed to comply with the applicable rule, shall be reported to the division within 7 days.

(h) Any facility using the procedure described in this section shall also be required to meet one of the following criteria:

(1) The solvent recovery system, such as a capture and control system, shall be dedicated to a single process line, for example one process line venting to a carbon adsorber system; or

(2) If the solvent recovery system controls multiple process lines, the owner or operator shall demonstrate by submitting written documentation to the division that the overall control meets or exceeds the most stringent standards applicable for each process line venting to the control system.

Env-A 804.07 Recordkeeping and Reporting. Recordkeeping and reporting requirements for CE testing shall be as follows:

(a) All facilities required to perform capture efficiency tests shall maintain a copy of the capture efficiency protocol on file.

(b) The owner or operator shall notify the division 30 days prior to performing any capture efficiency and/or control efficiency tests.

(c) All results of the test methods and CE protocols shall be reported to the division within 60 days of the test date, and a copy of the results shall be kept on file at the facility.

(d) For any source using PTE, the owner or operator shall demonstrate by submitting written documentation to the division that the enclosure meets the requirements given in Method 204 for a PTE during any testing of the control device.

(e) For any source using TTE, the owner or operator shall demonstrate by submitting written documentation to the division that:

(1) Its TTE meets the requirements given in Method 204 for a TTE during testing of their control device; and

(2) The quality assurance criteria for a TTE have been achieved.

(f) The owner or operator shall notify the division of any changes made to the

capture or control equipment, except for any reductions in the air flow at a collection point that occurs because the emission source that the collection point is serving is not being used.

(g) Measurements of average face velocity shall be done at all collection points whenever any physical changes are made to the control system.

(h) Any one of the following shall constitute a change to the capture or control equipment, thereby requiring a new capture efficiency test:

(1) An increase of more than 10% in the distance between any emission collection point and the emission source that the collection point is serving;

(2) A reduction in the average face velocity at any emission point ducted to the control device to a value less than 90% of the value measured and recorded during a previous capture efficiency test, except for reductions occurring at a collection point as a result of a shut-down of the emission point that said collection point is serving; or

(3) A change in the physical structure or operation which causes an increase or decrease in the amount of a specific air pollution emitted from a device or which results in the emission of any additional air pollutant, and such change is determined by the division to have a significant impact on air quality as determined by the NHARD POLICY AND PROCEDURE FOR AIR QUALITY IMPACT MODELING.

PART Env-A 805 CONTINUOUS EMISSION MONITORING

Env-A 805.01 Definitions. For the purposes of this Part, the following definitions shall apply:

(a) “Continuous Emission Monitoring (CEM) System” means the total equipment required for the determination of a gas concentration, pollutant emission rate or opacity reading and the necessary associated data recording equipment such as strip chart, computer disk and magnetic tape. Gaseous measuring CEM systems are limited to those measuring concentrations of carbon monoxide (CO), sulfur dioxide (SO₂), nitrogen oxides (NO_x) total reduced sulfur (TRS), hydrogen chloride (HCl), diluent gas (oxygen (O₂) or carbon dioxide (CO₂)), or hydrocarbons (HC) and monitors required by the EPA.

(b) “Facility operating hour” means 45 minutes of facility operation during a calendar hour.

(c) “Facility operation” means 1 of the following:

- (1) For steam generating unit facilities which are required by Part Env-A 805 to have a CEM installed, a time period during which any fuel is being combusted in the device; or
- (2) For process manufacturing facilities, which are required by Part Env-A 805 to have a CEM installed, a time period during which any material is being processed through the manufacturing unit which contributes to the emissions monitored by the CEM system; or
- (3) An alternative time period to items Env-A 805.01(c)(1) and Env-A 805.01(c)(2) provided that a facility submits technical justification to the division showing that the proposed alternative facility operation time period includes all periods of significant air emissions and the division accepts the justification.

(d) “Gaseous excess emission” means

- (1) an exceedance of the applicable emission limit for those gases listed in Env-A 805.01(a), CO, SO₂, NO_x, TRS, HCl, HC, O₂, CO₂ as measured by the CEM system and as averaged over any calendar day 24-hour period; or
- (2) an exceedance of the applicable federal standard for those gases listed in Env-A 805.01(a), CO, SO₂, NO_x, TRS, HCl, HC, O₂, CO₂ as measured by the CEM system, and where the averaging time period in an applicable federal standard is different than the 24-hour averaging period.
- (3) an exceedance of the applicable emission limit, specified in the permit to operate issued by the division, of the average gaseous emissions of those gases listed in Env-A 805.01(a), CO, SO₂, NO_x, TRS, HCl, HC, O₂, CO₂ as measured by the CEM system and as averaged over a time period that is different than the 24-hour averaging period.

(e) “Opacity excess emission” means

- (1) an exceedance of opacity of the applicable opacity standard during an aggregate consecutive time period in excess of 6 minutes within a 60-minute time period; or
- (2) an exceedance of opacity of the applicable opacity standard, for devices equipped with automatic soot blowers during an aggregate time

period in excess of 60 minutes within any 8-hour period; or

(3) an exceedance of opacity of the applicable opacity standard, for incinerators, during an aggregate consecutive time period in excess of 3 minutes within a 60-minute time period; or

(4) an exceedance of opacity during an aggregate consecutive time period in excess of 6 minutes within a 60-minute time period where the opacity exceeds 20% and an exceedance of opacity during an aggregate consecutive time period in excess of 2 minutes within the same 6-minute time period where the opacity exceeds 40%, for fuel burning devices installed after May 13, 1970 with gross heat input equal to or greater than 250 million BTU/hr.

(f) “Out of control periods” mean

(1) for a CEM system measuring gaseous emissions:

a. The time period beginning with the completion of the fifth, consecutive day where the calibration drift (CD) exceeds 2 times the performance specification drift limit for 5 consecutive days and ending with the CD check after corrective action has occurred that results in the performance specification drift limits being met; or

b. The time period beginning with the completion of a daily CD check preceding the daily CD check that results in the CD being greater than 4 times the performance specification and ending with the CD check after corrective action has occurred that results in the performance specification drift limits being met; or

c. The time period beginning with the completion of a relative accuracy test audit (RATA), cylinder gas audit (CGA), or relative accuracy audit (RAA) as defined in 40 CFR Part 60, Appendix F where the CEM system fails the accuracy criteria established and ending with successful completion of the same audit where the CEM system meets the accuracy criteria established after corrective action has occurred.

(2) for CEM system measuring opacity:

a. The time period beginning with the completion of the fifth, consecutive day where the calibration drift (CD) exceeds 2% opacity, and ending with the CD check after corrective action has

occurred that results in the performance specification drift limits being met; or

b. The time period beginning with the completion of a daily CD check preceding the daily CD check that results in the CD being greater than 5% opacity and ending with the CD check after corrective action has occurred that results in the performance specification drift limits being met; or

c. The time period beginning with the completion of a quarterly opacity audit where the CEM system fails the calibration error test as specified in 40 CFR Part 60, Appendix B, Specification 1 and ending with successful completion of the same audit where the CEM system passes the calibration error test established after corrective action has occurred.

(g) “Valid hour of CEM emission data” means 1 of the following:

(1) A minimum of 45 minutes collection of opacity or gaseous CEM concentration readings taken in a calendar hour as specified in Env-A 805.03. Data collected while the CEM is out of control, as defined by Env-A 805.01(f), shall not be considered valid. This data collection shall occur during the time(s) that the facility, on which the CEM is installed, is in operation or;

(2) For time-shared systems, 75% collection of gaseous CEM concentration readings of the total sampling time available for each emission point being monitored. Valid hours shall be determined for each emission point of the time-shared CEM system. Data collected while the CEM is out of control, as defined by Env-A 805.01(f), shall not be considered valid. This data collection shall occur during the time(s) that the facility, on which the CEM is installed, is in operation.

Env-A 805.02 Applicability.

(a) The division shall require the installation, operation, maintenance, and quality assurance testing of a CEM system which meets all of the requirements specified in Env-A 805.02(b), 805.03, 805.04, and 805.05 for a stationary source if any of the following listed conditions exist:

(1) A source is subject to the New Source Performance Standards, 40 CFR 60, or National Emission Standards for Hazardous Air Pollutants, 40 CFR Part 61, which require the source to comply with a specified opacity or

emission limit, and to install a specified CEM system;

(2) A source chooses to limit its potential to emit by accepting federally enforceable permit conditions which restrict its hours of operation, type or amount of material combusted, stored, or processed, or level of production, and continuous emission monitoring is determined by the division to be necessary to ensure that these permit conditions are not violated;

(3) A source utilizes air pollution control equipment in order to maintain compliance with an opacity or emission limit and continuous emission monitoring is determined by the division to be necessary in order to ensure that this limit is not exceeded and that the control equipment is performing correctly;

(4) A documented and repeated violation of any of the applicable opacity or emission limits found in Chapters Env-A 100-1300 occurs;

(5) A documented and repeated violation of any of the National Ambient Air Quality Standards, NAAQS, found in Env-A 300 occurs and the source is determined by the division to be a major contributor to the violation. A violation of the NAAQS shall be determined through 1 of the following:

a. A direct measurement using ambient air quality monitoring; or

b. Calculation utilizing the technical procedures found in the NHARD POLICY AND PROCEDURE FOR AIR QUALITY IMPACT MODELING; or

(6) By following the procedures in the NHARD POLICY AND PROCEDURE FOR AIR QUALITY IMPACT MODELING, the division determines that a source's emissions have a significant impact on air quality and continuous monitoring of emissions with a CEM system is necessary to ensure that the ambient air quality standards are achieved and maintained.

(b) Stationary sources as specified in 40 CFR, Part 51, Appendix P, Section 1.1, as amended on 51 FR 40675, November 7, 1986, but not including those exempted sources listed in Section 1.2 of Appendix P, shall install, calibrate, operate, and maintain a continuous emission monitoring system in accordance with all requirements set forth and referenced therein. In addition to the minimum data requirements set forth in 40 CFR Part 51, Appendix P, Sections 4 and 5, such

subject stationary sources shall record and report the total process operating time of the equipment for each calendar quarter to the director. The monitoring and recording required in Env-A 805.02 shall begin March 31, 1991.

Env-A 805.03 Minimum Specifications for CEM Systems. For those CEM systems installed after August 31, 1989, and not covered by Env-A 805.02(b), the following minimum specifications shall apply:

- (a) The minimum specifications presented in 40 CFR Part 51, Appendix P; 3.1 (Performance Specifications), 3.4.1 (Cycling times for Opacity CEM), 3.5 (Monitor Location), 3.7 (Zero and Drift) and 3.8 (Span) shall be incorporated herein by reference.
- (b) CEM systems for measuring gaseous emissions shall complete a minimum of 1 cycle of operation which shall include sampling, analyzing, and data recording for each successive 5 minute period. Longer time periods shall be approved by the director provided written documentation is submitted demonstrating that longer time periods are required to complete 1 cycle of operation for the pollutant of concern. The gaseous CEM system shall average and record the data for each 60-minute period.
- (c) All CEM systems, opacity and gaseous measuring included, shall have the capability of displaying instantaneous values of the appropriate output for use during audits.
- (d) CEM systems used to determine periods of opacity excess emission as defined by Env-A 805.01(e)(1) shall average data to result in 6-minute averages.
- (e) CEM systems used to determine periods of opacity excess emission as defined by Env-A 805.01(e)(2) shall average data to result in 1-minute averages.
- (f) CEM systems used to determine periods of opacity excess emission as defined by Env-A 805.01(e)(3) shall average data to result in 3-minute averages.
- (g) CEM systems used to determine periods of opacity excess emission as defined by Env-A 805.01(e)(4) shall average data to result in 2-minute averages. As an alternative to the 2-minute averages of Env-A 805.01(e)(4), a source may choose to determine periods of opacity excess emission in accordance with the more stringent Env-A 805.01(e)(1) and average data to result in 6-minute averages as specified in Env-A 805.03(d).
- (h) All stack volumetric flow measuring devices required to be installed after January 1, 1992 shall meet the following requirements:

- (1) All differential pressure flow monitors shall have an automatic blow-back purge system installed and, in wet stack emissions, shall have the capability for drainage of the sensing lines;
- (2) The stack flow monitoring system shall have the capability for on-line manual transducer calibration and for a zero check; and
- (3) The stack flow monitoring system shall be capable of displaying the individual parameters used in the stack flow calculation. For example, a differential pressure monitoring system shall be able to display instantaneous values of differential pressure, stack temperature, and relevant constants used in the calculation which reflect the static pressure assumed, gas molecular weight assumed and the pitot tube coefficient utilized.

Env-A 805.04 Data Recording. All CEM systems shall include strip or circular chart recorders to record instantaneous values of percent opacity and gaseous emission concentrations such as parts per million or percentage. Each strip chart or circular chart shall be stamped daily with time and date in order to allow for later data analysis. An alternate method of data recording shall be approved by the director provided that the source submits written documentation demonstrating that the alternate method can provide a continuous record of values for percent opacity and gaseous emission concentration equivalent to a strip or circular chart recorder.

Env-A 805.05 Performance Specification Testing. Performance specification testing for CEM systems installed after August 31, 1989 shall be performed in accordance with the following:

- (a) For those CEM systems monitoring opacity and gaseous emissions, performance specification requirements of 40 CFR Part 60, Appendix B shall apply;
- (b) For those CEM systems utilizing a Continuous Emission Rate Monitoring, CERM, system, as defined in 40 CFR Part 60, Appendix B, Specification 6, the requirements of Specification 6 shall apply;
- (c) For those CEM systems utilizing equipment for continuous measurement of effluent stream gas volumetric flow rate, as defined in 40 CFR Part 52, Appendix E, the requirements of Appendix E shall apply;
- (d) All performance specification testing shall be performed within 180 days of the CEM equipment initial startup; and

(e) A written report summarizing the results of the testing shall be submitted to the division within 60 days of the completion of the test.

Env-A 805.06 Quality Assurance Requirements. CEM system shall be subject to the following quality assurance requirements:

(a) For those systems monitoring gaseous emissions of SO₂, NO_x, CO, TRS, O₂ and CO₂, the quality assurance requirements and procedures described in 40 CFR Part 60, Appendix F shall apply. All requirements specified in Procedure 1 of Appendix F shall be met with the following additions and clarifications:

(1) Each source shall file with the division a copy of its written procedures, henceforth known as the QC plan, for implementing its quality control program for each CEM system within 6 months of the initial startup of each CEM installed after the effective date of this rule; and for existing CEM systems shall submit a QC plan by June 30, 1990.

(2) Each source owner or operator shall review the QC plan and all data generated by its implementation at least once each year and revise or update the QC plan, as necessary, based on the results of the annual review. The revised QC plan must be available for on-site review by the division at any time. Within 30 days of completion of the annual QC plan review, the source owner or operator must certify in writing that it will continue to implement its existing QC plan or submit in writing any changes to the plan and the reasons for each change.

(3) The division may request revision of the QC plan at any time based on the results of emission report reviews, inspections, audits, review of the QC plan, or any other information available to the division.

(4) The division shall be informed of all out of control periods as defined in Appendix F, paragraph 4.3 and Env-A 805.01(f) in the excess emission reports.

(5) It shall be acceptable for source personnel to perform their own Cylinder Gas Audits, CGA. The source shall notify the division 2 weeks prior to the planned audit. The division shall observe the procedure if the staff necessary to do so is available at the time such audit occurs.

(6) For existing CEM sources installed prior to August 31, 1989, the initial Appendix F audit shall be the Relative Accuracy Test Audit, RATA, required in 40 CFR Part 60, Appendix F, which shall be performed by June 30, 1990.

(7) A Relative Accuracy Audit, RAA, as defined in 40 CFR Part 60, Appendix F, may be performed in place of a CGA. For CEM systems where CGA audits cannot be performed, RAA audits, or other division approved audit procedures, shall be performed in place of the CGA.

(b) For those CEM systems monitoring gaseous emissions other than SO₂, NO_x, CO, TRS, O₂, and CO₂, audits shall be performed following procedures and frequency intervals approved by the division in accordance with the following:

(1) To obtain approval, the source shall submit written documentation to the division demonstrating that the proposed audit procedures are consistent with those presented in 40 CFR Part 60, Appendix B, Specifications 2 through 4, and Appendix F.

(2) Upon receiving documentation specified in subparagraph (b)(1), above, the division shall review the information submitted. If the information clearly demonstrates that the proposed audit procedures are consistent with those presented in 40 CFR Part 60, Appendix B, Specifications 2 through 4, and Appendix F., the director shall approve the proposed audit procedures.

(c) For those time-shared gaseous CEM systems, 1 analyzer measuring the pollutant concentration of more than 1 gas stream, the following audits shall be performed:

(1) An annual Relative Accuracy Test Audit, RATA, to check the analyzer at any sampling point; and

(2) Cylinder Gas Audits, CGAs, or Relative Accuracy Audits, RAAs, at all sampling points for each of the remaining 3 quarterly audits.

(d) For stack volumetric flow monitors, 3 quarterly audits shall be performed each calendar year, if required, which shall include the following:

(1) In 1 of the 4 quarters, a 9-run relative accuracy test audit (RATA) as specified in 40 CFR 60, Appendix B and F and Env-A 805 to be combined with the concentration continuous emission monitor (CEM) in order to allow for a relative accuracy check on the lbs/hour measurement.

(2) In 2 of the 4 quarters, a 3-run relative accuracy audit (RAA) to be performed in each of the 3 remaining quarters in order to determine the percentage accuracy of the stack flow monitor. Each of the 3 runs shall include the following:

- a. A minimum 21-minute 40 CFR 60, Appendix A, Method 1-2 velocity traverse which shall include measurements of differential pressure, stack temperature, and static pressure;
- b. The assumption of stack gas molecular weight to be the same as that used in the plant stack flow monitor or that determined from the most recent Method 3 and 4 measurement made at the subject source;
- c. A calculation of average wet standard cubic feet per hour measured for the run;
- d. A leak check after completion of the velocity traverse;
- e. The thermocouple used for measurement of stack gas temperature in the RAA shall be checked annually for calibration in boiling water and shall be read within 10°F of the boiling point;
- f. The pitot tube used shall conform to the specifications of 40 CFR Part 60, Appendix A, Method 2.
- g. A percentage accuracy calculation shall be performed after the 3-run RAA as follows:
 - i. $\% \text{ Accuracy} = ((\text{WSCFH, CEM} - \text{WSCFH, M2}) / (\text{WSCFH, M2})) \times 100$

Where:

WSCFH,CEM = 3-run average of the wet standard cubic feet per hour flow rate as measured by the plant stack flow monitor; and

WSCFH,M2 = 3-run average of the wet standard cubic feet per hour as measured by the Method 1 and Method 2 procedures.

- ii. The absolute value of percentage accuracy must be less than or equal to 10.0% or the monitor has failed the audit. If the percentage accuracy exceeds 10.0%, the stack flow monitor would then be considered “out of control” until necessary repairs/adjustments are performed to the system and a repeat of the audit successfully passes the percentage accuracy requirements.

(3) In 1 of the 4 quarters, it shall be acceptable for a source to perform a

calibration of the major component (i.e. transmitter/transducer) of the volumetric flow monitor following the manufacturers recommended calibration procedure.

(e) For those opacity CEM systems which are required to meet the criteria of 40 CFR Part 60, Appendix B, Specification 1:

(1) Quarterly audits shall be performed with the monitor in place for Calibration Error, 40 CFR Part 60, Appendix B, Specification 1, Section 7.1.4, and System Response, 40 C R Part 60, Appendix B, Specification 1, Section 7.1.5.

(2) An annual 7 day length zero/upscale drift test, as defined in 40 CFR Part 60, Appendix B, Specification 1, Sections 7.4.1 and 7.4.2, shall be performed and reported to the division following the procedures set forth in 40 CFR Part 60, Appendix B, Specification 1, Section 7.4.1 and 7.4.2.

(3) A minimum of 3 calibration attenuators, low, mid, and high, shall be utilized in the audits described in Env-A 805.06(d) as specified in 40 CFR Part 60, Appendix B, Specification 1, Section 7.1.2. For those sources to which any subpart of 40 CFR Part 60 shall not be applicable, the selected span value, used for the selection of the attenuation values, shall be 40% opacity for those devices subject to a 20% opacity standard and 60% opacity for those devices subject to a 40% opacity standard. Table 1-2 of 40 CFR Part 60, Appendix B, Specification 1, Section 7.1.2 shall be used to determine the required calibration attenuator values.

(4) The values of the calibration attenuators used in the above audits shall be checked at least once every 6 months with a spectrophotometer meeting the specifications of 40 CFR Part 60, Appendix B, Specification 1, Section 3.4 or with a secondary instrument as defined and described in 40 CFR Part 60, Appendix B, Specification 1, Section 7.1.3. If the measured value of the calibration attenuator differs from the calibrated value by more than $\pm 2\%$ opacity, the calibration attenuator shall be recalibrated or replaced until the measured value does not differ from the calibrated value by more than $\pm 2\%$ opacity. If written documentation is submitted to the division showing stability of the attenuator values, the division shall reduce the frequency of the attenuators check to once per year.

(5) It shall be acceptable for source personnel to perform their own quarterly audits as described in Env-A 805.06(d)(1) and the annual drift test as described in Env-A 805.06(d)(2). The source shall notify the division 2 weeks prior to the planned audit or test procedure. The division

shall observe the procedure if the staff necessary to do so is available at the time such audit or test occurs.

(f) The required quarterly audits shall be done anytime during each calendar quarter, but successive quarterly audits shall occur no closer than 2 months apart.

(g) Within 30 days of the completion of a CEM audit, the owner or operator of the facility shall submit a written summary audit results report to the division in accordance with the following:

(1) For gaseous CEM audits, the report format shall conform to that presented in 40 CFR Part 60, Appendix F, Procedure 1, Section 7;

(2) For opacity CEM audits, the report format shall conform to that presented in EPA-600/8-87-025, April 1987, "Technical Assistance Document: Performance Audit Procedures for Opacity Monitors".

(3) For stack volumetric monitors, the report shall include all required information specified in Env-A 805.06(d). Audit reports shall be submitted for all 4 quarters of the calendar year.

Env-A 805.07 Data Availability Requirements.

(a) Each facility with a CEM shall operate the CEM at all times during operation of the facility, except for periods of CEM breakdown, repairs, calibration checks, preventative maintenance, and zero/span adjustments.

(b) The percentage CEM data availability for opacity and all gaseous concentration monitors shall be maintained at a minimum of 90% on a calendar quarter (3-month) basis.

(c) The percentage CEM data availability for opacity and all gaseous concentration monitors shall be maintained at a minimum of 75% for any calendar month.

(d) Percentage CEM data availability shall be calculated as follows:

$$\text{Percentage data availability} = \frac{(\text{VH} + \text{OD}) \times 100}{(\text{OH} - \text{AH})}$$

Where: VH = The number of valid hours of CEM data in a given time period;

OD = The number of calendar days in a given time period with 18 or more

facility operating hours in the calendar day. This value is added in to the data availability equation in order to allow for 1 hour during every facility operating day for the performance of CEM calibration /quality assurance activities;

OH = The number of facility operating hours during a given time period;
and

AH = The number of facility operating hours during a given time period when the CEM was being audited following those procedures specified in Env-A 805.06 which require that the CEM be taken out of service in order to conduct the audit (i.e. CGA's, stack volumetric flow monitor audits, and opacity monitor calibration error audits).

(e) If the percentage data availability requirements cannot be met for any calendar quarter, the facility shall:

(1) Submit a plan within 15 days of the end of the quarter of failure to meet the data availability requirements specifying in detail the steps to be taken in order to meet the availability requirements for the current quarter and future quarters; and

(2) Implement the plan to meet the data availability requirements no later than 30 days after the end of the quarter of failure.

(f) If the percentage data availability requirements cannot be met for any 2 consecutive calendar quarters the facility shall:

(1) Install a replacement CEM system meeting all of the requirements of 40 CFR Part 60, Appendix B, Specifications 1- 6 in accordance with the following deadlines:

a. The replacement CEM system shall be installed and operational no later than 180 days following the end of the second quarter of failure to meet the data availability requirements; and

b. Certification testing of the replacement CEM system shall be initiated no later than 210 days following the end of the second quarter of failure to meet the data availability requirements.

(2) During the period of time from the end of the second quarter of failure to meet the data availability requirements until the successful certification testing completion of the replacement CEM system, the facility shall:

- a. Take any and all actions available to it to maintain the quality of data obtained from the currently operating CEM and to maximize data availability of the CEM; or
- b. Replace the existing CEM with a temporary alternative that is determined by the division to monitor the compliance status of the emission point of concern.

(g) Alternatives to the replacement of the entire CEM system as required by paragraph (f) of this section shall be allowed provided that the facility can provide the division with technical justification that the alternative will ensure that the 90% data availability requirement shall be met on a consistent basis.

(h) Facilities subject to 40 CFR Part 75 (Acid Rain Program), Continuous Emission Monitoring, shall be allowed to use the definition for valid hour of data and percentage data availability found in 40 CFR 75 if the affected facility can demonstrate that this approach is at least as stringent as the methods specified in Env-A 805.07. These facilities must still meet the minimum percentage data availability requirements of Env-A 805.07(a), (b), and (c).

Env-A 805.08 Excess Emission Reports. Excess Emission Reports shall be submitted to the division by each source with a CEM system, as follows:

(a) For those sources subject to 40 CFR Part 60 and required to install, calibrate, operate, and maintain a CEM system, excess emission reports for opacity excess emissions and gaseous excess emissions shall conform to the specifications found in 40 CFR Part 60, 60.7(c)(1) through (c)(4) and any applicable subpart of 40 CFR Part 60. In addition to these requirements, daily averages of gaseous CEM measurements and calculated emission rates shall be reported to the division whether or not an excess emission has occurred.

(b) If daily averages are not feasible, the source shall submit a written request to provide averages based on an alternative time period to the division. The request shall include the proposed alternative time period and documentation showing why daily averages are not feasible. If the request clearly identifies the alternative time period and provides documentation showing why daily averages are not feasible, the division shall approve an alternative time period.

(c) All sources not subject to 40 CFR Part 60 that are required to install, calibrate, operate and maintain a CEM system shall provide the division with emission reports for opacity excess emissions and gaseous excess emissions on a quarterly basis, or other time period as required in a temporary permit or permit to operate issued by the division. The report shall be filed with the division within 30 days

of the last date of the reporting period. These reports shall include but not be limited to the following information:

- (1) Magnitude of each excess emission;
- (2) Date and time of commencement and completion of each time period of excess emission;
- (3) Specific cause of the excess emission and the corrective action taken;
- (4) Date and time(s) of each period where the CEM was not operational, and the total percentage of time where the CEM was not operational;
- (5) When no excess emissions have occurred or the CEM system has not been inoperative, repaired, or adjusted, such information shall be stated in the report; and
- (6) For gaseous measuring CEM systems, daily averages of the measurements made and emission rates calculated shall be reported whether or not excess emissions have occurred.
 - a. If daily averages are not feasible, the source shall submit a written request to provide averages based on an alternative time period to the division. The request shall include the proposed alternative time period and documentation showing why daily averages are not feasible. If the request clearly identifies the alternative time period and provides documentation showing why daily averages are not feasible, the division shall approve an alternative time period.

Env-A 805.09 Valid Averaging Periods. The number of hours of valid CEM data required for determining a valid averaging period for the different emission standard periods shall be:

- (a) for a 3-hr emission standard period, 2 hours of valid data;
- (b) for a 4-hr standard emission standard period, 3 hours of valid data;
- (c) for a 8-hr standard emission standard period, 6 hours of valid data;
- (d) for a 12-hr standard emission standard period, 9 hours of valid data;
- (e) for a 24-hr standard emission standard period, 16 hours of valid data.

Env-A 805.10 Use of CEM Data. The division shall use CEM data to determine compliance with applicable emission limits, and other legally enforceable permit conditions. The data required to be collected by this rule shall be kept in accordance with Env-A 805.11 for a minimum of 2 years and may be used either directly or indirectly for the following:

- (a) Compliance determinations;
- (b) Air quality impact analysis;
- (c) Air pollution dispersion modeling;
- (d) Control technology review; and
- (e) Emissions inventory.

Env-A 805.11 CEM Recordkeeping Requirements.

(a) All data required to be collected by Env-A 805 shall be retained by the source for a minimum of 2 years. No records shall be destroyed without approval from the division.

(b) Any facility wishing to destroy records maintained pursuant to Env-A 805 shall request approval from the director by providing the following information:

- (1) Identification of the facility involved;
- (2) The time interval(s) of the data to be destroyed;
- (3) A descriptive listing of all the data proposed to be eliminated; and
- (4) The reason(s) why a facility wishes to destroy the records.

(c) Upon receipt of a request for approval to destroy records, the director shall review the information provided and shall determine whether any benefits would be obtained by requiring the records to be retained, for instance by assisting future studies to determine compliance with state or federal regulations. Within 60 days of receipt of the information specified above, the director shall grant the request if the reasons for destroying the records outweigh the benefits to be gained from retaining the records.

PART Env-A 806 TESTING FOR DIESEL ENGINES AND MOTOR VEHICLES

Env-A 806.01 Testing for Diesel Engine and Motor Vehicles. Testing to determine compliance with Env-A 1101 shall be in accordance with methods specified by the EPA, including dynamometer procedure and opacity meter measurement. All such testing shall be conducted only after the initial startup and warm-up periods have been completed.

PART Env-A 807 APPROVAL OF ALTERNATE METHODS

Env-A 807.01 Approval of Alternate Methods. For any method of emission control, testing or equipment maintenance that is an alternative to a method specified by these rules and that requires approval by the director of the division, the following procedure shall apply:

- (a) The person seeking approval of the alternate method shall submit the following information to the director:
 - (1) A description of the proposed alternative method;
 - (2) The identity of the compound that is to be tested or controlled or the equipment that is to be maintained by the alternative method;
 - (3) The identity and description of the facility at which the alternative method will be implemented; and
 - (4) Technical data and information demonstrating that the purpose of the specified method will be achieved by the alternative method and that the alternative method produces results that are no less precise and accurate than those produced by the specified method.
- (b) The director shall review the information submitted pursuant to Env-A 807.01(a). The director shall approve the proposed alternative method within 60 days of receipt of the complete application and shall notify the applicant and the EPA of the decision, if the information includes the following:
 - (1) A description of the proposed alternative method;
 - (2) The identity of the compound that is to be tested or controlled or the equipment that is to be maintained by the alternative method;
 - (3) The identity and description of the facility at which the alternative method will be implemented; and
 - (4) Technical data and information demonstrating that the purpose of the specified method will be achieved by the alternative method and that the

alternative method produces results that are no less precise and accurate than those produced by the specified method.